

REMARKS

This paper is filed in response to the Office Action mailed on April 18, 2006. Currently, Claims 1-24 are pending in the application. Of these, Claims 20-22 are withdrawn from consideration as being drawn to a non-elected invention. Claims 1-15 are allowed. Claims 16-19, 23, and 24 stand rejected. Claims 25-28 have been added. Reconsideration of Claims 16-19, and 23-28 is respectfully requested.

The Rejection of Claims 16 and 19 Under 35 U.S.C. § 102(b)

Claims 16 and 19 are rejected under 35 U.S.C. § 102(b) as being anticipated by Hatch et al. (U.S. Patent No. 5,897,770). Applicants respectfully traverse the rejection.

For a reference to be anticipatory, the reference must exactly describe the claimed invention.

In rejecting the claims, the Examiner states:

Hatch discloses a water purification cartridge, comprising: an inlet member (#6) configured to provide treated water in a first axial direction; a ring member (#12) adjacent to the inlet member; a purifier vessel (#18) adjacent to the ring member, wherein the purifier vessel is configured to treat the untreated water to provide treated water; a bulkhead (#14) adjacent to the purifier vessel, wherein the bulkhead is configured to separate untreated water from treated water; a dwell chamber (between #20 and #32) exterior to the purifier vessel wherein the dwell chamber is configured to provide treated water flow in a second axial direction opposite to the first axial direction.

(Office Action, pp. 2-3.)

Claim 16 recites: "a ring member adjacent to said inlet member, wherein said ring member is configured to distribute said untreated water."

The purported ring member identified by the Examiner is component numbered 12. The Hatch patent teaches that component numbered 12 is a cartridge end cap located at either end of the filtration cartridge 8. (Col. 5, lines 29-31.) Because Hatch teaches that end caps 12 are to

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close the end of the filtration cartridge 8, the end caps are not configured to distribute said untreated water, as recited in Claim 16. The Examiner has not stated how or why Hatch teaches "wherein said ring member is configured to distribute said untreated water."

Accordingly, the withdrawal of the rejection of Claims 16 and 19 is respectfully requested.

The Rejection of Claims 17 and 18 Under 35 U.S.C. § 103(a)

Claims 17 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hatch in view of Worley (U.S. Patent No. 6,548,054).

Claims 17 and 18 are dependent either directly or indirectly from Claim 16.

Accordingly, the rejection of the withdrawal of Claims 17 and 18 is respectfully requested.

The Rejection of Claims 23 and 24 Under 35 U.S.C. § 103(a)

Claims 23 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hatch in view of Worley.

A *prima facie* rejection requires a suggestion or motivation either in the references or in the knowledge generally available to modify a reference or to combine references, a reasonable expectation of success, and all the claim limitations must be taught or suggested in the prior art references.

In rejecting Claim 23, the Examiner states:

Hatch discloses a water purification cartridge, comprising: a purifier vessel (#18) and a dwell chamber (between #20 and #32) enclosed within an outer skin (#4). However, Hatch does not disclose that the purifier vessel contains a polymer having pendant hydantoin groups. Worley teaches halogenated polystyrene hydantoin (Col. 3, Lines 32-41). It would have been obvious to one of ordinary skill in the art to modify Hatch with the element of Worley because it is a biocide used in water filters (Col. 2, Lines 15-22).

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Applicants submit that the motivation or suggestion of the Examiner is not sufficient under 35 U.S.C. § 103. The motivation or suggestion fails because the teachings of the Hatch patent teach away from the hydantoinylated compounds described in the Worley patent. The Hatch patent teaches that the feed chemical 22 can be any slow dissolving substance that performs a secondary purification or disinfection function on the incoming water. Most typically, the chemical used is a halogenated ion exchange resin. (Col. 8, lines 20-24 of Hatch). Applicants submit that the hydantoinylated compounds described in the Worley patent are neither dissolvable nor an ion exchange resin. Applicants submit that hydantoinylated compounds function differently than ion exchange resins and, therefore, the substitution of ionic exchange resins with hydantoinylated compounds is not obvious. Furthermore, applicants believe that hydantoinylated compounds kill microorganisms through a two-step approach. First, the microorganisms come into physical contact with the hydantoinylated compounds. Second, the attached halogen slowly migrates into the microorganism and disrupts its functioning, thereby effectively "killing" the microorganism. This migration of halogen atoms into the microorganism requires time. Such subsequent killing is produced in the dwell chamber of the claimed device. Also, there is a small amount of chlorine or bromine in the water to recharge the hydantoinylated compounds that, by itself, is too low as to be sufficient to kill microorganisms. Ion exchange resins work by releasing a large amount of iodide ions into the water, which effectively kill the microorganisms. Accordingly, to the person skilled in the art familiar with the respective compounds, ion exchange resins are not interchangeable with hydantoinylated compounds.

Furthermore, the Examiner indicates that Hatch is "unable to provide residence time for the water to react with substances from the purifier vessel." (Office Action, p. 4.) Claim 23 recites: "a dwell chamber enclosed within an outer skin, after said purifier vessel to provide

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residence time." By the Examiner's statement, Hatch does not teach or suggest Claim 23. Additionally, since Hatch does not provide any residence time, there is no reasonable expectation of success if the substitution of polymers with pendant hydantoin groups for ion-exchange resins is attempted.

Accordingly, because of an insufficient motivation or suggestion, no reasonable expectation of success, and not all the claim limitations being taught or suggested by the prior art references, the *prima facie* rejection is not tenable. Therefore, the withdrawal of the rejection of Claim 23 and dependent Claim 24 is respectfully requested.

New Claims 25-28

Claims 25-28 are new dependent claims and submitted to be allowable. Claims 25-28 are supported from the specification, at least, at page 11, line 26; and page 11, line 30.

CONCLUSION

In view of the foregoing remarks, applicants submit that Claims 16-19, and 23-28 are in condition for allowance. If the Examiner has any further questions or comments, the Examiner may contact the applicants' attorney at the number provided below.

Respectfully submitted,

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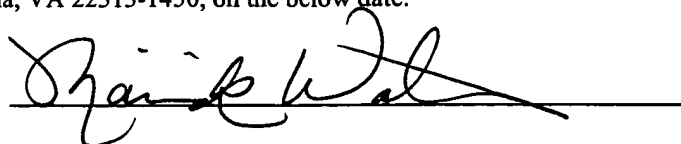


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July 18, 2006



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